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09/393,274
GE998-038

4

REMARKS

Claims 1, 3-6, 8-15, and 17-21 are all the claims presently pending in the application. Claims 2, 7, and 16 have been canceled.

Entry of this §1.116 Amendment is proper. Since the amendments above narrow the issues for appeal and since such features were in the claims earlier, such amendments do not raise a new issue requiring a further search and/or consideration by the Examiner. As such, entry of this Amendment is believed proper and is earnestly solicited.

It is noted that the claims have been amended solely to more particularly point out Applicant's invention for the Examiner, and not for distinguishing over the prior art, narrowing the claim in view of the prior art, or for statutory requirements directed to patentability.

It is further noted that, notwithstanding any claim amendments made herein, Applicant's intent is to encompass equivalents of all claim elements, even if amended herein or later during prosecution.

Attached hereto is a marked-up version of the changes made to the Specification and/or claims by the current Amendment. The attached pages are captioned "Version with markings to show changes made".

Claim 21 stands rejected under 35 U.S.C. § 102(b) as being anticipated by either Sanchez (U.S. Patent No. 5,828,301) (hereinafter "Sanchez"), Brooks (U.S. Patent No. 5,204,672) (hereinafter "Brooks") or Robinson (GB 2,129,176) (hereinafter "Robinson"). Applicant notes that the claim has been amended to depend from claim 1 above thus rendering the rejection moot. Claim 21 is patentable over Bowker and Robinson for the reasons discussed below.

Claims 5 and 11-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bowker and Robinson, and further in view of Sanchez.

These rejections are respectfully traversed in the discussion below.

09/393,274
GE998-038

5

I. THE CLAIMED INVENTION

Applicant's invention, as defined for example in independent claim 1 (and substantially similarly in independent claims 6, 11, 15 and 20) is directed to an authorization control system for personal use of selected devices. In a non-limiting embodiment, the present invention includes a signal provider for outputting signals representing a personal code data and a signal receive interface for receiving a signal that is connected to a device which requires proper authorization to use. The invention was discussed in the Amendment filed on September 19, 2002, and for convenience the Examiner is referred thereto.

A feature of the present invention, in a non-limiting embodiment, is that the signal delivery interface is capacitively coupled to the signal receive interface. With such a feature it is unnecessary to provide measures to avoid interfering radiated signals. Further, a user may wear protective clothing (e.g., gloves) without interfering with a radiated signal.

A further feature of the present invention is that a signal path between a signal provider and a signal receive interface may include a user's body (e.g. see page 3, lines 8-16; page 5, lines 10-15; and page 6, lines 7-9).

An exemplary configuration of the authorization control system is shown in Fig. 1 of the application. With such a claimed combination of features, the novel present invention can provide an optimum control over valuable or dangerous devices (e.g., firearms, etc.).

The conventional systems, such as those discussed below and in the Related Art section of the present application, do not have such a structure, and fail to provide for such an operation.

Indeed, such features are clearly not taught or suggested by the cited references.

II. THE PRIOR ART REFERENCES

A. Bowker in view of Robinson Reference

The Examiner asserts that:

09/393,274
GE998-038

6

[Re: claims 1-4 and 6-10] Bowker shows the authorization control system for personal use and provided for the signal provider as an optic fiber prism 10.

Robinson shows an authorization control system and provides for the signal provider for outputting signals representing personnel code data through a path that includes the user's body and a receiver interface 14, see figure 1.

It would have been obvious to one having ordinary skill in the art to provide personal coded data through a path that includes a user's body as a signal provider in the authorization control system of Bowker because the specific use of a user's body as a signal provider in the authorization control system is clearly suggested by Robinson.

However, Applicant respectfully disagrees.

Firstly, the combination of Bowker and Robinson would not have been obvious.

Specifically, as admitted by the Examiner, Bowker "provides for the signal provider as an optic fiber prism 10" (e.g., see page 2 of the Office Action). Thus, in Bowker "[a] small fraction, perhaps on the order of one thirtieth, of the light fraction transmitted into this medium is partially scattered as rays 17 back into and along the same fibers 51 which brought the illumination.....These rays 17, and the pattern of their occurrence in some fibers 51 but not others, accordingly constitute the optical data or information signal which is collected from the thumb" (e.g., see column 32, lines 28-37 of Bowker).

Therefore, Bowker clearly teaches that the optical signals are the rays 17 which bounce off the thumb of a user. Thus, in Bowker, rays 17 (e.g., which constitute the optical data or information signal which is collected from the thumb) in no way travel along a signal path through a user's body between a signal provider and a signal receive interface. That is, Bowker relies upon optical imaging and light is only being reflected off a body surface (e.g., finger) to provide details of variations (e.g., finger prints) and does not pass through a user's body, as in the claimed invention.

Further, it would not have been obvious to modify the optical system of Bowker to send

09/393,274
GE998-038

7

rays 17 through a human body. As Bowker discloses, *"the mass of living tissue (or other material) within or behind that surface, is slightly translucent and acts as a scattering medium"* (e.g., see column 32, lines 24-26).

Robinson discloses a personnel identification system based on the combination of the electric conductivity of the human body and a touch sensitive contact plate or switch. The personnel identification system consists of two basic elements, identification and the avoidance of involuntary triggering. Thus, because the human body does not lend itself easily to light transmission, combining the optic-fiber prism assembly of Bowker with the personnel identification system of Robinson which conducts an electrical signal through the wearer's body would not have been obvious.

In a sense, the arrangement of Robinson is superfluous because it does not provide the needed safety against involuntary action. Thus, if a person is properly identified and touches the touch-sensitive panel, which is in no way made impossible in Robinson's arrangement, the related action will be triggered even if it should not be (e.g., accidentally). Robinson discloses *"no conscious act such as the operation of a separate push button or the insertion of a card in a card reader is required"* (e.g., see lines 63-65 of Robinson).

In conventional working devices, measures to prevent against this kind of occurrence (e.g., with or without identification) are numerous and may include push buttons with threshold pressure values which must be consciously operated. Thus, Robinson is subsuming voluntary triggering and identification under one action.

These measures can equally well be achieved by other means (e.g., inserting an identity badge into a slot, by transponder technology, iris/voice recognition, or near field technology as in the Personal Area Network (PAN) described in the specification).

However, in Robinson, the signals are transmitted by electrical conduction through the wearer's body. That is, Robinson discloses *"[t]he watch (10) includes a transmitter for transmitting the identification code as a modulated alternating signal by electrical conduction through the wearer's body to the touch element (12), so as to provide resistance to interfering radiated signals"* (e.g., see Abstract of Robinson) (emphasis Applicant's).

The PAN technology, by contrast, is based on the principle of electrostatic, capacitive coupling. With such a principle, this makes it unnecessary to provide measures to avoid

09/393,274
GE998-038

8

interfering radiated signals.

In contrast, such measures (e.g., to avoid interfering radiated signals) are an essential part of the Robinson patent. That is, since Robinson depends on the conductivity of the human body, direct contact between the touch element and the human finger is essential.

For example, Robinson discloses "[t]his dual purpose aspect serves to confine reception of signals to the touching condition so as to minimise the chance of false responses to purely radiated signals" (e.g., see page 2, lines 94-98 of Robinson). Thus, in Robinson a glove could interrupt the electrical contact and as a result, a signal transmission.

Further, even if Bowker and Robinson would have been combined (arguendo), the use of gloves by a user would be precluded because the gloves would interrupt the rays 17 of Bowker and the electrical contact of Robinson.

Thus, Applicant respectfully submits that the combination of Bowker and Robinson would not have been made, absent hindsight reasoning based upon a reading of Applicant's own specification, and even if the references would have been combined they still would not teach or suggest all of the limitations found in the claimed invention.

Thus, turning to the clear language of independent claim 1 (and similarly that of independent claim 6), there is no teaching or suggestion by Bowker and Robinson, alone or (arguendo) in combination, of "[a]n authorization control system for personal use of a device, comprising:

storage means for storing personal code data;

signal provider means for outputting signals representing said personal code data;

signal delivery interface means for receiving signals representing said personal code data, and adapted for wear by a user in proximity to a body of the user;

signal receive interface means, connected to the device, for receiving said signal from said signal delivery interface means;

a signal processing device, connected to said signal receive interface means, for determining a user's authorization for using the device by evaluating said signals and outputting a signal indicative of an evaluation result;

a control device connected to said signal processing device; and

an actuator for said device coupled to said control device, for allowing said user to use

09/393,274
GE998-038

9

said device based on an output of said control device,

wherein a signal path between said signal provider means and said signal receive interface means includes a user's body, and

wherein said signal delivery interface means is capacitively coupled to said signal receive interface means".

Thus, independent claims 1 and 6 and dependent claims 2-4 and 7-10 are neither anticipated nor for that matter rendered obvious by Bowker.

B. Bowker and Robinson in view of Sanchez Reference

The Examiner asserts that:

[Re: claims 5 and 11-20] Sanchez show the finger ring as illustrated in figure 3. It would have been obvious to one having ordinary skill in the art to input the personal code with a ring finger in the authorization control system of Bowker as modified by Robinson because the specific use of a ring finger in an authorization control system is clearly suggested by Sanchez.

However, Applicant again respectfully disagrees.

Firstly, as described above, the combination of Bowker and Robinson would not have been obvious. Further, even if Bowker would have been combined (arguendo) with Robinson, the combination does not teach or suggest that the signal path between a signal provider and a signal receive interface includes a user's body. Also, as noted above, Bowker and Robinson do not teach or suggest "wherein said signal delivery signal delivery interface is capacitively coupled to the signal receive interface".

As discussed in the Amendment filed on September 19, 2002, Sanchez only discloses an electronically activated holster that releasably secures a weapon to the holster. Sanchez also does not teach or suggest "wherein said signal delivery signal delivery interface is capacitively coupled to the signal receive interface".

Specifically, Sanchez discloses that "predetermined conditions are selected by a user and

09/393,274
GE998-038

10

these inputs can be sensed with photosensitive devices attached to the holster that detect bar codes on a user's hand or glove so that a predetermined pattern can be read and conveyed....Alternatively, an ultrasonic transmitter can be worn by a user in a wristband and a cooperative receiver on the holster designed to be activated when a predetermined proximity is achieved" (e.g., see Abstract).

Thus, Sanchez is not teaching or suggesting "a signal path between said signal provider means and said signal receive interface means includes a user's body". Instead, bar codes on a user's hand or glove or an ultrasonic radio signal are used to convey a signal.

Further, Sanchez does not teach or suggest "said signal delivery interface is capacitively coupled to said signal receive interface", as defined by independent claims 15 and 20. Instead, in Sanchez there is only a direct contact only an optical interface in a reading of the bar code or a radio signal interface. Nowhere does Sanchez teach or suggest the capacitive coupling of the claimed invention.

As previously noted, in the device of Sanchez, there are many disadvantages when compared to the device of the present invention. For example, dirt, blood and other substances interfere with positive recognition in an application using a bar code.

Further, regarding the use of a radio signal in Sanchez, interference with the radio signal may occur at a critical moment. Also, in Sanchez, a disadvantage is that the action of the releasing mechanism requires a longer reaction time. That is, time will be lost in moving the bar code or signal transmitter into the required proximity to the holster to release the latch.

Thus, turning to the clear language of independent claim 11 (and similarly that of independent claims 15 and 20) Sanchez fails to teach or suggest "[a] finger ring for a device authorization control system, comprising:

*a storage device for storing data, wherein said data comprises personal code data;
a signal provider outputting signals representing said personal code data; and
a signal delivery interface for receiving signals representing said personal code data,
wherein a signal path between said signal provider and said signal delivery interface
includes a user's body,*

wherein a signal path between said signal provider and said signal delivery interface

09/393,274
GE998-038

11

includes a user's body".

Thus, claims 5 and 11-20 are neither anticipated nor for that matter rendered obvious by Bowker and Robinson in view of Sanchez.

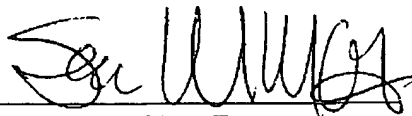
III. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submits that claims 1, 3-6, 8-15, and 17-21, all of the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Assignee's Deposit Account No. 50-0510.

Respectfully Submitted,



Sean M. McGinn, Esq.

Reg. No. 34,386

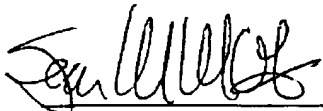
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09/393,274
GE998-038

12

CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that I am filing this Amendment by facsimile with the United States Patent and Trademark Office to Examiner Donnie Crosland, Group Art Unit 2632 at fax number (703) 308-9052 this 29th day of January, 2003.



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09/393,274
GE998-038

13

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 2, 7, and 16 have been canceled without prejudice or disclaimer.

The claims have been amended as follows:

1 1. (Amended) An authorization control system for personal use of a device, comprising:
2 storage means for storing personal code data[:];
3 signal provider means for outputting signals representing said personal code data;
4 signal delivery interface means for receiving signals representing said personal code data,
5 and adapted for wear by a user in proximity to a body of the user;
6 signal receive interface means, connected to the device, for receiving said signal from
7 said signal delivery interface means;
8 a signal processing device, connected to said signal receive interface means, for
9 determining a user's authorization for using the device by evaluating said signals and outputting
10 a signal indicative of an evaluation result;
11 a control device connected to said signal processing device; and
12 an actuator for said device coupled to said control device, for allowing said user to use
13 said device based on an output of said control device,
14 wherein a signal path between said signal provider means and said signal receive
15 interface means includes a user's body, and
16 wherein said signal delivery interface means is capacitively coupled to said signal receive
17 interface means.

3. (Amended) The authorization control system as claimed in claim [2] 1, wherein said device comprises a firearm.

09/393,274
GE998-038

14

1 6. (Amended) A firearm comprising:

2 a signal processing device;

3 signal receive interface means, connected between a signal source external to said firearm
4 and said signal processing device included in said firearm, wherein said signal processing device
5 is connected to said signal receive interface means for delivering an output signal;

6 a controlling device connected to said signal processing device; and

7 an actuator for said firearm, connected to said controlling device, for selectively
8 inhibiting the firing of the firearm based upon an output signal from said controlling device,

9 wherein a signal path between said signal receive interface means and said signal
10 processing device includes a user's body, and

11 wherein said signal receive interface means comprises capacitive coupling means.

1 15. (Amended) An authorization control system for personal use of a device, comprising:

2 a storage device for storing personal code data[:];

3 a signal provider for outputting signals representing said personal code data;

4 a signal delivery interface for receiving signals representing said personal code data, and
5 adapted for wear by a user in proximity to a body of the user;

6 a signal receive interface, connected to the device, for receiving said signal from said
7 signal delivery interface;

8 a signal processing device, connected to said signal receive interface, for determining a
9 user's authorization for using the device by evaluating said signals and outputting a signal
10 indicative of an evaluation result;

11 a control device connected to said signal processing device; and

12 an actuator for said device coupled to said control device, for allowing said user to use
13 said device based on an output of said control device,

14 wherein a signal path between said signal provider and said signal delivery interface
15 includes a user's body, and

16 wherein said signal delivery interface is capacitively coupled to said signal receive
17 interface.

09/393,274
GE998-038

15

1 20. (Amended)A firearm comprising:

2 a signal processing device;

3 a signal receive interface, connected between a signal source external to said firearm and
4 said signal processing device included in said firearm, wherein said signal processing device is
5 connected to said signal receive interface for delivering an output signal;

6 a controlling device connected to said signal processing device; and

7 an actuator for said firearm, connected to said controlling device, for selectively
8 inhibiting the firing of the firearm based upon an output signal from said controlling device,

9 wherein a signal path between said signal source and said signal processing device
10 includes a user's body, and

11 wherein said signal receive interface comprises a capacitive coupling.

1 21. (Amended) The authorization control system for personal use of a device, according to claim

2 1, wherein said device is usable when a comparison of two carriers of electronically stored
3 identification information affirms an identical match.